

ABSTRACT

A semiconductor structure comprises a buried first
5 semiconductor layer of a first doping type, a second
semiconductor layer of the first doping type on the buried
semiconductor layer, which is less doped than the buried
first semiconductor layer, a semiconductor area of a second
doping type on the second semiconductor layer, so that a pn
10 junction is formed between the semiconductor area and the
second semiconductor layer, and a recess present below the
semiconductor area in the buried first semiconductor layer,
which comprises a semiconductor material of the first
doping type, which can be less doped than the buried first
15 semiconductor layer and has a larger distance to the
semiconductor area of the second doping type on the second
semiconductor layer, such that the breakdown voltage across
the pn junction is higher than if the recess were not
provided. Thereby, it is achieved that both a semiconductor
20 structure with a desired breakdown voltage as well as a
further semiconductor structure without this recess can be
generated in the buried first semiconductor layer with
optimized HF properties.

25 Figure 1

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